REMARKS

Claims 1-20 are in the case. Claims 5-6, 11-12, and 17-18 are indicated as allowable if rewritten in independent form, for which indication the applicants thank the examiner. Claims 1-4, 7-10, 13-16, and 19-20 are rejected under 35 USC § 102 over USPN 6,110,213 to Vinciarelli et al. The rejections are respectfully traversed. Claims 5-6, 11-12, and 17-18 have been amended, and claims 13-16 and 19-20 are hereby cancelled. No new matter has been introduced by the amendments, which are supported by the disclosure of the original claims and the specification. Reconsideration and allowance of the claims are respectfully requested.

ALLOWABLE CLAIMS

Claims 5-6, 11-12, and 17-18 are objected to as depending from rejected base claims. However, the office action states that these claims would be allowable if rewritten so as to not depend from a rejected base claim, and to contain all the limitations of the base claim and any intervening claims. Applicants have so amended these claims. Reconsideration and allowance are requested.

CLAIM OBJECTIONS

In regard to claim 1, the terms "standardized functional blocks," "according to functions desired," and "associated with the desired ones" are objected to. Applicants provide clarification for each of these terms below.

The phrase "standardized functional blocks" is used throughout the specification, and is equivalent to the phrase "standardized functional modules," which is also used throughout the specification. Applicants refer to the many uses of these two phrases as cumulative descriptions of the meanings of the phrases. Thus, applicants assert that there is no ambiguity as to the meaning of this phrase, and respectfully request that the objection be withdrawn. Reconsideration and allowance of claim 1 is respectfully requested.

The phrase "according to functions desired" is used completely descriptively, without any terms of art, and within the plain meaning of the English language. The

functional blocks have already been described in claim 1 as having "a known function." To design an integrated circuit having desired functions (or to say it another way, "according to functions desired") means to select various ones of the functional blocks "according to [the] functions desired." The meaning of the phrase is also made clear by the used of the word "desired" in the specification. Thus, there is no special meaning associated with the language. Applicants respectfully request that the objection be withdrawn. Reconsideration and allowance of claim 1 is respectfully requested.

The phrase "associated with the desired ones" is likewise used in a completely descriptive manner within the plain meaning of the English language, and without any specially defined meaning. At a point where this phrase is used in the claim, some of the integrated circuit standardized functional blocks have been selected for inclusion into the integrated circuit design. The selected blocks are the "desired" integrated circuit standardized functional blocks. It has also been established that specific ones of the package substrate standardized functional blocks are associated with specific ones of the integrated circuit standardized functional blocks. It is desired to select the appropriate package substrate standardized functional blocks for use in the design with the integrated circuit standardized functional blocks that have already been selected. Thus, we select "package substrate standardized functional blocks associated with the desired ones [the ones already selected] of the integrated circuit standardized functional blocks."

The meaning of the phrase is also made clear by the used of the word "desired" in the specification. Thus, there is no special meaning associated with the language, and applicants respectfully request that the objection be withdrawn. Reconsideration and allowance of claim 1 is respectfully requested.

CLAIM REJECTIONS UNDER §102

Claims 1-4, 7-10, 13-16, and 19-20 are rejected Vinciarelli et al. Claims 13-16 and 19-20 have been cancelled. Independent claim 1 claims, *inter alia*, a method of designing a ***packaged integrated circuit***, including a ***package substrate*** and an ***integrated circuit***, by selecting desired ones of the ***integrated circuit standardized functional blocks***, and designing the package substrate with a plurality of ***package substrate standardized functional blocks***, where each of the plurality of package substrate

standardized functional blocks has a known ***package substrate contact array pattern***, a known ***signal trace routing layer pattern***, a known ***ground plane layer pattern***, and a known ***power plane layer pattern***, where a given one of each of the plurality of package substrate standardized functional blocks is associated with a given one of the plurality of integrated circuit standardized functional blocks, and the package substrate is designed by selecting package substrate standardized functional blocks associated with the desired ones of the integrated circuit standardized functional blocks.

Vinciarelli et al. do not describe such a method. Specifically, ***Vinciarelli et al. do not describe a method of designing a packaged integrated circuit.*** Vinciarelli et al. do not describe designing any kind of integrated circuit. Instead, ***Vinciarelli et al. describe designing and fabricating a power supply***. However, the power supplies described by Vinciarelli et al. are not integrated circuits, as the term is commonly understood. As described in the Wikipedia, "an integrated circuit, often referred to as a microchip or simply chip, is a miniaturized electronic circuit (consisting mainly of semiconductor devices, as well as passive components) which has been manufactured on a thin substrate of semiconductor material." The power supplies of Vinciarelli et al. are not anything like miniaturized electronic circuits of semiconductor devices manufactured on a thin substrate of semiconductor material. Rather, they are large, board-level devices.

Thus, Vinciarelli et al. do not describe integrated circuit standardized functional blocks, package substrate standardized functional blocks, package substrate contact array patterns, signal trace routing layer patterns, ground plan layer patterns, or power plan layer patterns, or any of the elements from which integrated circuits are designed and fabricated. Instead, Vinciarelli et al. describe assembling large scale circuit components onto boards to fabricate power supplies.

Therefore, claim 1 patentably defines over Vinciarelli et al. Reconsideration and allowance of claim 1 are respectfully requested. Dependent claims 2-4 depend from independent claim 1, and contain additional important aspects of the invention. Therefore, dependent claims 2-4 patentably define over Vinciarelli et al. Reconsideration and allowance of dependent claims 2-4 are respectfully requested.

Similar to that as described above in regard to claim 1, independent claim 7 claims, *inter alia*, a method of designing a ***package substrate*** for a ***packaged integrated***

circuit, having ***integrated circuit standardized functional blocks***, with a known function and a known ***integrated circuit contact array pattern***, by designing the package substrate with a plurality of package substrate standardized functional blocks, where each of the plurality of package substrate standardized functional blocks has a known ***package substrate contact array pattern***, a known ***signal trace routing layer pattern***, a known ***ground plane layer pattern***, and a known ***power plane layer pattern***, where a given one of each of the plurality of package substrate standardized functional blocks is associated with a given one of the plurality of integrated circuit standardized functional blocks, and the package substrate is designed by selecting package substrate standardized functional blocks associated with the integrated circuit standardized functional blocks.

Vinciarelli et al. do not describe such a method. Specifically, ***Vinciarelli et al. do not describe a method of designing a package substrate for a packaged integrated circuit***. Vinciarelli et al. do not describe designing any kind of integrated circuit. Instead, ***Vinciarelli et al. describe designing and fabricating a power supply***. However, the power supplies described by Vinciarelli et al. are not integrated circuits, as the term is commonly understood.

Thus, Vinciarelli et al. do not describe integrated circuit standardized functional blocks, package substrate standardized functional blocks, package substrate contact array patterns, signal trace routing layer patterns, ground plan layer patterns, or power plan layer patterns, or any of the elements from which integrated circuits and package substrates are designed and fabricated. Instead, Vinciarelli et al. describe assembling large scale circuit components onto boards to fabricate power supplies.

Therefore, claim 7 patentably defines over Vinciarelli et al. Reconsideration and allowance of claim 7 are respectfully requested. Dependent claims 8-10 depend from independent claim 7, and contain additional important aspects of the invention. Therefore, dependent claims 8-10 patentably define over Vinciarelli et al. Reconsideration and allowance of dependent claims 8-10 are respectfully requested.

CONCLUSION

Applicants assert that the claims of the present application patentably define over the prior art made of record and not relied upon for the same reasons as given above.

03-0964

Applicants respectfully submit that a full and complete response to the office action is provided herein, and that the application is now fully in condition for allowance. Action in accordance therewith is respectfully requested.

In the event this response is not timely filed, applicants hereby petition for the appropriate extension of time and request that the fee for the extension be charged to deposit account 12-2355. If other fees are required by this amendment, such as fees for additional claims, such fees may be charged to deposit account 12-2252.

Sincerely,

LUEDEKA, NEELY & GRAHAM, P.C.

By: 

Rick Barnes, 39,596

2005.11.28